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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,829	11/04/2003	J. Carl Cooper	PIXL-00100	7048

7590
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P.O. Box 1667
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02/28/2007

EXAMINER

CUTLER, ALBERT H

ART UNIT	PAPER NUMBER
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2622

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/701,829	Applicant(s) COOPER, J. CARL	
	Examiner Albert H. Cutler	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is responsive to application 10/701,829 filed on November 4, 2003. Claims 1-9 are pending in the application and have been examined by the examiner.

Specification

2. The disclosure is objected to because of the following informalities: Lack of clarity and precision.

In line 11 of page 11 of the specification, "image rotation electronics, 147" should be written as "image rotation electronics, 145" in order to correspond with figure 12 of the drawings. Appropriate correction is required.

Claim Objections

3. Claims 8 and 9 are objected to because of the following informalities: Lack of clarity and precision.

Claim 8 refers to the digital camera of claim 6. However, no digital camera appears in claim 6. Upon further examination the Examiner has determined that claim 8 was probably meant to depend from claim 7. For the purpose of examination, the Examiner will read claim 8 as "The digital camera of claim 7". Appropriate correction is required.

Claim 9 refers to the digital camera of claim 6. However, no digital camera appears in claim 6. Upon further examination the Examiner has determined that claim 8 was probably meant to depend from claim 7. For the purpose of examination, the Examiner will read claim 9 as "The digital camera of claim 7". Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Thomas(US Patent 6,781,623).

Consider claim 1, Thomas teaches:

A digital imaging system(figures 5 and 6) comprising:

- a. an image sensor("CCD", 16, figure 6, column 4, lines 38-41);
- b. an orientation sensor("sensor", 20, figure 6, column 4, lines 42-45); and

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c. an image manipulator("Digital Signal Processor", 36, figure 6, column 5 lines 18-24) adapted to:

i) receive image sensor orientation(See figure 6, the image sensor orientation is obtained by the frame memory(38), which is connected to the image sensor(16), and provided to the image manipulator(34), column 5, lines 15-22.);

ii) receive image orientation(See figure 6, the image orientation is obtained by the sensor(20) and provided to the image manipulator(34), column 5, lines 18-26.); and

iii) adjust the image orientation(The image manipulator(34) applies a rotational transform to the image, column 5, lines 18-26, figure 7, column 6, lines 33-46.)

Consider claim 2, Thomas teaches:

A digital imaging system(figures 5 and 6) comprising:

a. an image sensor configured to sense an image subject and to capture a presentation of the image("CCD", 16, figure 6, column 4, lines 38-41);

b. an orientation sensor("sensor", 20, figure 6, column 4, lines 42-45) configured to sense changes in the orientation of an image with respect to the base line orientation coordinates("The sensor(20) is operable to determine the orientation of the hand-held terminal relative to its environment. More specifically the sensor is configured to determine a rotational angle between the vertical

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alignment axis(i.e. changed orientation axis) of the hand-held device and a reference alignment axis(i.e. base line orientation coordinates) defined by a real space orientation.” Column 4, lines 42-48); and

c. an image manipulator(“Digital Signal Processor”, 36, figure 6, column 5 lines 18-24) adapted to:

i) receive image sensor orientation from the image sensor(See figure 6, the image sensor orientation is obtained by the frame memory(38), which is connected to the image sensor(16), and provided to the image manipulator(34), column 5, lines 15-22.)

ii) receive image orientation from the orientation sensor(See figure 6, the image orientation is obtained by the sensor(20) and provided to the image manipulator(34), column 5, lines 18-26.); and

iii) adjust the image orientation in relation to the baseline orientation coordinates(The image manipulator(34) applies a rotational transform to the image, column 5, lines 18-26, figure 7, column 6, lines 33-46. One way to apply a rotational transform is through baseline orientation coordinates, column 5, line 62 through column 6, line 5.)

Consider claim 3, and as applied to claim 1 above, Thomas further teaches that the digital imaging system is chosen from the group consisting of still cameras and video cameras(The digital imaging system could be either a still camera or video camera, column 5, lines 27-45).

Consider claim 4, and as applied to claim 1 above, Thomas further teaches that the image sensor("CCD", 16, figure 6) is a charge couple device array(column 4, lines 38-41).

Consider claim 5, and as applied to claim 1 above, Thomas further teaches that the orientation sensor is chosen from the group consisting of mechanical gyroscope sensors(Thomas teaches that a mechanical gyroscope sensor can be used to apply a rotational transform and maintain an orientation which has been manually aligned, column 7, line 35 through column 8, line 19.)

Consider claim 6, and as applied to claim 1 above, Thomas further teaches that the image manipulator comprises an image rotation system(The image manipulator(34) applies a rotational transform to the image, column 5, lines 18-26, figure 7, column 6, lines 33-46. One way to apply a rotational transform is through baseline orientation coordinates, column 5, line 62 through column 6, line 5.).

Consider claim 7, Thomas teaches:

A digital camera(figures 5 and 6) comprising:

a. a charge coupled device image sensor("CCD", 16, figure 6, is a charge couple device array, column 4, lines 38-41);

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b. a gyroscopic camera orientation sensor(Thomas teaches of an orientation sensor(20) that may be a magneto-inductive sensor, column 4, line 63. However Thomas further teaches in an alternate embodiment that a gyroscope can be used to sense the orientation of the camera, column 7, line 35 through column 8, line 19.); and

c. an image manipulator("Digital Signal Processor", 36, figure 6, column 5 lines 18-24) adapted to:

i) receive image sensor orientation(See figure 6, the image sensor orientation is obtained by the frame memory(38), which is connected to the image sensor(16), and provided to the image manipulator(34), column 5, lines 15-22.);

ii) receive image orientation(See figure 6, the image orientation is obtained by the sensor(20) and provided to the image manipulator(34), column 5, lines 18-26.); and

iii) rotate the image(The image manipulator(34) applies a rotational transform to the image, column 5, lines 18-26, figure 7, column 6, lines 33-46.)

Consider claim 8, and as applied to claim 7 above, Thomas further teaches that the digital camera is chosen from the group consisting of still cameras and video cameras(The digital imaging system could be either a still camera of video camera, column 5, lines 27-45).

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Consider claim 9, and as applied to claim 7 above, Thomas further teaches that the gyroscope orientation sensor is chosen from the group consisting of mechanical gyroscope sensors(Thomas teaches that a mechanical gyroscope sensor can be used to apply a rotational transform and maintain an orientation which has been manually aligned, column 7, line 35 through column 8, line 19.)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert H. Cutler whose telephone number is (571)-270-1460. The examiner can normally be reached on Mon-Fri (7:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc-Yen Vu can be reached on (571)-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



NGOC-YEN VU
SUPERVISORY PATENT EXAMINER